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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,909	09/29/2000	Shawn Gettemy	PALM-2921 . US . P	8978

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EXAMINER

HARRINGTON, ALICIA M

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 06/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,909

Applicant(s)

GETTEMY ET AL.

Examiner

Alicia M Harrington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 29 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 29 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8-14 and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 8 and 18 includes a "sensory light" wave for propagation through a light pipe. This is not a commonly used term in the art nor is the Examiner clear as to applicant's intended meaning in the claim. Is the light from output from a sensor or a form of light response from an event in the use of the system? Thus, the language renders the claim indefinite.

9-14 inherits the indefinites of claim 8 from which they depend.

19-20 inherits the indefinites of claim 18 from which they depend

The claims will be examined as best understood by the Examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Graham et al (US 6,351,260).

Regarding claim 8, Graham discloses in user input illumination device for a portable computer display (see col. 5, lines 10-15) for displaying an image, a light pipe coupled to the display (110), a lens (118) for directing illumination light waves and sensory light waves (light from the light source without interruption from an input device and light interrupted from an input device (sensory light); see col. 4 and figure 1), a wave guide array (104), and light source (102).

Regarding claim 9, the light channeled through each wave-guide doesn't interfere. Thus, sensory light signal and illumination light do not interfere.

Regarding claims 10-11, Graham discloses two lens (micro lens array) where 116 are a distribution lens (116- transferring light to a transfer medium) and culminating lens (118; enters the final wave guide).

Claims 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Henningsen (US 6,296,383).

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Regarding claim 15, Henningsen discloses a illumination distribution system where light is emitted from a light source (1), directing the emitting light in a wave guide (5), propagating the light through a lens into the a light pipe (4) to a display (col. 12, lines 32-41).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4, 6,7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myers (US 5,097,396) in view of Henningsen (US 6,296,383).

Regarding claim 1, Myers discloses a fiber optic backlight system for displays (such as liquid crystal displays) comprising a display (col. 1, lines 45-50) for displaying an image, a light pipe (fiber 18) and a light source (14) where a ferrule directs the light to the fiber. However, Myers fails to specifically disclose a lens for directing light into the light pipe/fiber and wave-guide array coupled to lens and light source. Although, it is a well-known illumination distribution system, as taught by Henningsen.

In a related field of endeavor, Henningsen discloses an illumination system where the light source (1) coupled to a light guide (wave guide or bundle of wave guides; 5) that is coupled to an optical element (3). The optical element then couples the light to a bundle of light guides (equivalent to bundle of fibers; col. 8, lines 54-67, col. 9, lines 1-26; col. 12, lines 32-40). Thus, it

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would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Myers, as taught by Henningsen, to provide a light signal with controllable intensity and relatively small light loss.

Regarding claim 2, Myers and Henningsen fail to disclose the display has protective shield for protecting the display from physical damage. However, displays incased in protective housings or having a protective cover coupled to a display is notoriously well known in the art of displays, thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Myers and Henningsen, to include this feature, since displays can often time be damaged by constant touching or effected by other environmental conditions.

Regarding claim 4, Myers light is directed to a plurality of points/sites at the display and see figure 2 of Henningsen.

Regarding claim 6, Myers shows the light is transmitted straight through the fibers to the display. Regarding claim 7, Myers implement transmission with an optical fiber, which would inherently have microstructures (core, cladding).

Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Myer in view of Henningsen as applied to claim 1 above, and further in view of Naum (US 6,272,269).

Regarding claim 3, Myers and Henningsen fail to specifically disclose the wave-guide connected to the light source comprises a high reflective material as claimed. Although, it is well known in the art, as taught by Naum.

In a related field of endeavor, Naum discloses an improved illumination system where the wave-guide attached to the light source comprises components that internally reflect the light down the length of the wave-guide (col. 5, lines 9-12, col. 6, lines 35-55; col. 10, lines 30-40).

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Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Myers and Henningsen, to include this feature, since Naum teaches a system where light transfers from wave guide to fiber to display and Naum's system provides an illuminator in which light intensity illumination may efficiently coupled into and transmitted through optical fibers.

Regarding claim 5, Myers further teaches each fiber corresponding to site on back of the display. However, Myers and Henningsen fail to disclose an embodiment where the light waves form an overlapping grid. Although, it is well known in the art, as taught by Naum.

In a related field of endeavor, Naum discloses an improved illumination system where the wave guide attached to the light source comprises components that internally reflect the light down the length of the wave guide (col. 5, lines 9-12, col. 6, lines 35-55; col. 10, lines 30-40) to fiber/pipe attached to display element (such as illustrated in figure 23C. The light it output such that it forms a cross grid light pattern. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Myers and Henningsen, to include this feature, since Naum teaches a system where light transfers from wave guide to fiber to display and Naomi's system provides an illuminator in which light intensity illumination may efficiently coupled into and transmitted through optical fibers.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graham, as applied to claim 11 above.

Regarding claim 14, Graham fails to specifically disclose light source is LED. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made

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to use a LED because it's a light source with controllable intensity and LED's are well known light source for use in illuminations systems-the Examiner takes official notice to this fact.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Henningsen, as applied to claim 15 above, further in view of Naum (US 6,272,269).

Regarding claim 16, Henningsen fails to specifically disclose the light reflects off the wall of the wave-guide. Although, it is well known in the art, as taught by Naum.

In a related field of endeavor, Naum discloses an improved illumination system where the wave-guide attached to the light source comprises components that internally reflect the light down the length of the wave-guide (col. 5, lines 9-12, col. 6, lines 35-55; col. 10, lines 30-40). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Henningsen, to include this feature, since Naum teaches a system where light transfers from wave guide to fiber to display and Naum's system provides an illuminator in which light intensity illumination may efficiently coupled into and transmitted through optical fibers.

Allowable Subject Matter

Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12, 13 and 18-20 are would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 12, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which include a gather lens and light detector for detecting a break in the sensory light waves.

Regarding claim 13, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which include the sensory light being infrared.

Regarding claim 17, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which include where a display illumination distribution method comprises emitting a portion of the light form light pipe and conveying another portion of light waves for emissions at different locations as claimed.

Regarding claim 18, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which include two different types of light emitted including a visible light and sensory light as claimed.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M Harrington whose telephone number is 703 308 9295. The examiner can normally be reached on Monday - Thursday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 703 308 4883. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308 7724 for regular communications and 703 308 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

AMH
June 26, 2002



Alicia M Harrington
Examiner
Art Unit 2873


JORDAN SCHWARTZ
PRIMARY EXAMINER